

OCDO RECOMMENDATION TO TAC

Proposal No.: D-09-02 **For TAC Meeting:** May 21, 2009

Proposer: American Municipal Power (AMP) Ohio

Proposal Title: American Municipal Power Generation Station (AMPGS) Bridge Loan for a 1000 MW Coal Fired Power Plant to be Built in Meigs County

Total Project Cost: \$3,257,600,000 **Loan Requested from OCDO:** \$30,000,000

Proposal Summary: The AMPGS is a 1000 MW coal fired generation station to be located in Meigs County. The AMPGS design is state of the art and will deploy the Power Span pollution control system, which was developed in OCDO projects D-99-01 and D-01-02, where control levels of 99% SO₂, 90% NO_x, 80% Mercury, and 90% PM_{2.5} (fine particulates) were demonstrated. The process also features capture of sulfur in the form of a sulfur-nitrogen fertilizer. This was a five year development effort with a total project investment of \$8,000,000 by OCDO, \$26,000,000 by Power Span, and \$10,100,000 by First Energy. The requested \$30,000,000 million bridge loan for this project will be used for costs associated with the scale up from demonstration to commercial deployment of the Power Span ECO system.

AMP-Ohio's commitment to using the Power Span Eco control system was stated in an AMP-Ohio Board Resolution in February 2008. Also, AMP-Ohio must file an amendment before the OPSB and obtain approval prior to construction if it elects to use a sulfur control technology other than Power Span. All OEPA and OPSB permits have been obtained. AMP-Ohio has executed a memorandum of understanding with the Andersons Corp. concerning ammonium sulfate processing and marketing. AMP-Ohio's goal is to begin construction by late 2009. There are appeals to the OEPA air permit and NPDES permit, but no stays of the permits have been issued, so AMP-Ohio can legally begin construction at this time.

The AMPGS coal feed will contain a substantial proportion of Ohio coal mixed with other Central Appalachian coals available on the Ohio River.

AMP-Ohio is taking steps in the design and planning of the AMPGS to facilitate the option of carbon capture in the future. AMP-Ohio is following closely Power Span's efforts to add CO₂ capture to the capability of the Power Span ECO system. AMP-Ohio has also hired Blue Source LLC of Utah to evaluate the CO₂ sequestration opportunities within a 200 mile radius of the project.

Professional Staff Recommendation: OCDO staff recommends funding. The use of an OCDO loan to assist in the deployment of the first commercial installation of the Power Span ECO system is an appropriate next step in the long term goal of OCDO to deploy a multi-pollutant control technology that address all of the major pollutants including PM_{2.5} particulates. It is thought that the proposed system will be less costly than the commercial alternatives of a SO₂ scrubber, SCR system for NO_x control, carbon injection for mercury control, and wet electrostatic participation for PM_{2.5} particulate control. The system eliminates the possibility of an SO₃ plume forming when the NO_x control system is operated, which has been a major problem at some Ohio power plants. Also, the sulfur waste will come from the system as a commercial ammonia-sulfate fertilizer product rather than something that faces a saturated wall-board market or will require disposal in a landfill. Providing support for deployment of the Power Span ECO system in the form of a loan is a very low risk option for OCDO. Finally, over and above eventual repayment of the loan, the deployment of the Power Span ECO system in this application will yield some royalty repayments back to OCDO for its support of the technology in OCDO project D-99-01 and D-01-20.